STN SEARCH for anti sense therapy, GP88 & cancer treatment

DAVIS 09/824,647

```
=> d his

     (FILE 'HOME' ENTERED AT 12:24:14 ON 09 SEP 2002)

     FILE 'HCAPLUS' ENTERED AT 12:24:25 ON 09 SEP 2002
L1            69 S SERRERO G?/AU
L2            29 S GP88
L3             3 S L1 AND L2
                 SELECT RN L3 1-3

     FILE 'REGISTRY' ENTERED AT 12:26:01 ON 09 SEP 2002
L4            24 S E1-24
                 E GP88/CN
L5             4 S L4 AND "GP88"
L6             5 S "GP88"
L7             1 S L6 NOT L5

     FILE 'HCAPLUS' ENTERED AT 12:28:10 ON 09 SEP 2002
L8             3 S L3 AND L4
L9            31 S L6 OR "GP88"
L10        25511 S ANTISENSE
L11         1037 S ANTI-SENSE
L12            2 S L9 AND L10-11
L13            0 S L12 NOT L3
L14       593244 S ?CANCER? OR ?TUMOR? OR ?CARCINOGEN? OR METASTES!S OR LEUKEM?
L15            7 S L9 AND L14
L16            4 S L15 NOT L3
L17           12 S L9(L)(?THERAP? OR INHIBIT? OR TREAT?)
L18            9 S L17 NOT (L15-16 OR L3 OR L12)
```

inventor search

there are 4 GP88 registry entries from Applicant's work

there are only 5 GP88 cpds in file reg

3 citations w/ 24 cpds displayed

31 cites for GP88

only 2 related to "antisense"

they are in applicant's work

4 cites related to GP88 and cancer, etc

9 cites relating GP88 to therapy, inhibition etc

Inventor search

=> d ibib abs hitstr ind

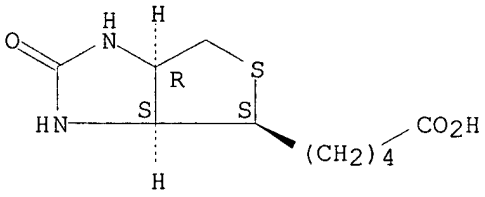
L8 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:158330 HCAPLUS
DOCUMENT NUMBER: 136:180189
TITLE: Methods and kits for diagnosing tumorigenicity and determining resistance to the antineoplastic effects of antiestrogen therapy
INVENTOR(S): **Serrero, Ginette**
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 50 pp., Cont.-in-part of U.S. Ser. No. 456,886.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2002025543 | A1 | 20020228 | US 2001-880842 | 20010615 |
| PRIORITY APPLN. INFO.: | | | US 1997-863079 B3 | 19970523 |
| | | | US 1999-456886 A2 | 19991208 |

AB The invention concerns methods and kits for diagnosing tumorigenicity and for detg. whether a cancer patient is resistant to the pharmacol. effects of antiestrogen therapy. Increased levels of the PC-cell-derived growth factor (PCDGF) known as **GP88**, are indicative of tumorigenicity and resistance to the pharmacol. effects of antiestrogen therapy. The methods and kits of the invention are useful for assessing the tumorigenicity of a biol. sample from a patient and detg. whether the patient is a candidate for antiestrogen, including tamoxifen, therapy.

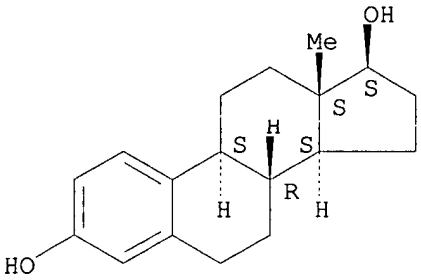
IT **58-85-5**, Biotin
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)
RN 58-85-5 HCAPLUS
CN 1H-Thieno[3,4-d]imidazole-4-pentanoic acid, hexahydro-2-oxo-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



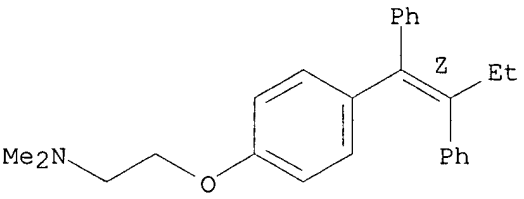

IT **50-28-2**, Estradiol, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study) (methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)
RN 50-28-2 HCAPLUS
CN Estra-1,3,5(10)-triene-3,17-diol (17.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




IT **10540-29-1**, Tamoxifen
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)
RN 10540-29-1 HCAPLUS
CN Ethanamine, 2-[4-[(1Z)-1,2-diphenyl-1-butenyl]phenoxy]-N,N-dimethyl- (9CI) (CA INDEX NAME)

Double bond geometry as shown.




IT **399598-64-2 399598-65-3**
RL: PRP (Properties)
(unclaimed nucleotide sequence; methods and kits for diagnosing tumorigenicity and detg. resistance to the antineoplastic effects of antiestrogen therapy)
RN 399598-64-2 HCAPLUS
CN 1: PN: US20020025543 SEQID: 5 unclaimed DNA (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 399598-65-3 HCAPLUS
CN 3: PN: US20020025543 SEQID: 7 unclaimed DNA (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **399598-66-4 400187-27-1**
RL: PRP (Properties)
(unclaimed protein sequence; methods and kits for diagnosing tumorigenicity and detg. resistance to the antineoplastic effects of antiestrogen therapy)
RN 399598-66-4 HCAPLUS
CN 4: PN: US20020025543 SEQID: 8 unclaimed protein (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 400187-27-1 HCAPLUS
CN 2: PN: US20020025543 SEQID: 5 unclaimed protein (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM G01N033-574

NCL 435007230
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 1, 2, 8, 14
ST diagnosis tumorigenicity resistance antineoplastic antiestrogen therapy kit growth factor
IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(D1; methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)
IT Cytometry
(FACS (fluorescence-activated cell sorting); methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)
IT Animal cell line
(MCF-7; methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)
IT Imaging
(NMR; methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)
IT Growth factors, animal
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(PCDGF (PC-cell-derived growth factor); methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)
IT Genetic methods
(RNAse protection assay; methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)
IT PCR (polymerase chain reaction)
(RT-PCR (reverse transcription-PCR); methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)
IT Estrogens
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antiestrogens, resistance; methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)
IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(cDNA; methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)
IT Intestine, neoplasm
(colon; methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)
IT Immunoassay
(immunol. staining; methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)
IT Nucleic acid hybridization
(in situ; methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)
IT Antitumor agents
Blood analysis
Blood plasma
Blood serum
Bone, neoplasm
Brain, neoplasm
Cerebrospinal fluid
DNA formation
DNA microarray technology

Diagnosis
Drug resistance
Fluorescent substances
Human
Imaging
Kidney, neoplasm
Labels
Liver, neoplasm
Lung, neoplasm
Microscopy
Ovary, neoplasm
Pancreas, neoplasm
Radiochemical analysis
Skin, neoplasm
Sound and Ultrasound
Test kits
Testis, neoplasm
Transformation, neoplastic
Urine analysis
(methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)

IT Estrogen receptors
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)

IT Enzymes, uses
Radionuclides, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)

IT Antibodies
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)

IT Mammary gland
(neoplasm; methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)

IT **58-85-5**, Biotin
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)

IT **50-28-2**, Estradiol, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)

IT **10540-29-1**, Tamoxifen
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods and kits for diagnosing tumorigenicity and detg. resistance to antineoplastic effects of antiestrogen therapy)

IT **399598-64-2 399598-65-3**
RL: PRP (Properties)
(unclaimed nucleotide sequence; methods and kits for diagnosing tumorigenicity and detg. resistance to the antineoplastic effects of antiestrogen therapy)

IT **399598-66-4 400187-27-1**
RL: PRP (Properties)
(unclaimed protein sequence; methods and kits for diagnosing

tumorigenicity and detg. resistance to the antineoplastic effects of antiestrogen therapy)

=> d ibib abs hitstr ind 2

L8 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:792254 HCAPLUS
DOCUMENT NUMBER: 135:340241
TITLE: Human 88-KDa tumorigenic growth factor and its antagonists for cancer diagnosis and therapy
INVENTOR(S): **Serrero, Ginette**
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 52 pp., Cont.-in-part of U.S. Ser. No. 863,079, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 6309826 | B1 | 20011030 | US 1997-991862 | 19971216 |
| WO 9852607 | A1 | 19981126 | WO 1998-US10555 | 19980522 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9877978 | A1 | 19981211 | AU 1998-77978 | 19980522 |
| EP 1011723 | A1 | 20000628 | EP 1998-926056 | 19980522 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| US 2002061859 | A1 | 20020523 | US 2001-813156 | 20010321 |
| US 2002094966 | A1 | 20020718 | US 2001-824807 | 20010404 |

PRIORITY APPLN. INFO.:
US 1997-863079 B2 19970523
US 1997-991862 A 19971216
WO 1998-US10555 W 19980522
US 1999-456886 A3 19991208

AB The invention relates to cloning and characterization of a human 88-KDa glycoprotein referred as **GP88**, which is the precursor of granulin/epithelin precursor. **GP88** is expressed in a tightly regulated fashion in normal cells and overexpressed and unregulated in highly tumorigenic cells derived from the normal cells, shown by mRNA distribution pattern. **GP88** is an autocrine growth factor for the highly tumorigenic PC cells and is stringently required for their growth. This invention relates to products and methods for treating cancer and for diagnosing tumorigenicity and other diseases assocd. with alteration in **GP88** expression or action. Antagonists to an 88KDa autocrine growth and tumorigenicity stimulator are provided which inhibit its expression or biol. activity. The antagonists include antisense oligonucleotides and antibodies.

IT **147036-84-8**
RL: ADV (Adverse effect, including toxicity); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)
(amino acid sequence; 88-KDa tumorigenic growth factor and antagonists)
RN 147036-84-8 HCAPLUS

CN Granulin, prepro- (human clone HBM3/HBM12 reduced) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **216663-36-4P**, Glycoprotein **GP88** (mouse strain C3H PC cell)
RL: BOC (Biological occurrence); BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process)
(amino acid sequence; 88-KDa tumorigenic growth factor and antagonists)
RN 216663-36-4 HCAPLUS
CN Glycoprotein GP88 (mouse strain C3H PC cell) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **14158-31-7**, Iodine 125, biological studies
RL: AGR (Agricultural use); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(for **GP88** labeling; 88-KDa tumorigenic growth factor and antagonists)
RN 14158-31-7 HCAPLUS
CN Iodine, isotope of mass 125, at. (8CI, 9CI) (CA INDEX NAME)

$^{125}I$

IT **140086-63-1**, GenBank M75161
RL: ADV (Adverse effect, including toxicity); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)
(nucleotide sequence; 88-KDa tumorigenic growth factor and antagonists)
RN 140086-63-1 HCAPLUS
CN DNA, (human clone HBM3/HBM12 granulin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **216663-35-3P**, DNA (mouse strain C3H PC cell glycoprotein **GP88** cDNA plus flanks)
RL: BOC (Biological occurrence); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(nucleotide sequence; 88-KDa tumorigenic growth factor and antagonists)
RN 216663-35-3 HCAPLUS
CN DNA (mouse strain C3H PC cell glycoprotein GP88 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **371180-05-1 371180-06-2 371180-07-3**
**371180-08-4 371180-09-5 371180-10-8**
**371180-11-9**
RL: PRP (Properties)
(unclaimed nucleotide sequence; human 88-KDa tumorigenic growth factor and its antagonists for cancer diagnosis and therapy)
RN 371180-05-1 HCAPLUS
CN DNA, d(C-C-T-A-C-T-T-G-G-C-A-G-T-A-C-A-T-C-T-A-C-G-T-A) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 371180-06-2 HCAPLUS

CN DNA, d(C-G-A-G-A-A-T-T-C-A-G-G-C-A-G-A-C-C-A-T-G-T-G-G-G-T-C) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 371180-07-3 HCAPLUS
CN DNA, d(C-T-G-A-C-G-G-T-T-C-A-C-T-A-A-A-C-G-A-G-C-T-C) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 371180-08-4 HCAPLUS
CN DNA, d(G-G-A-T-C-C-A-C-G-G-A-G-T-T-G-T-T-A-C-C-T-G-A-T-C) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 371180-09-5 HCAPLUS
CN DNA, d(G-A-A-T-T-C-G-C-A-G-G-C-A-G-A-C-C-A-T-G-T-G-G-A-C) (9CI) (CA INDEX NAME)

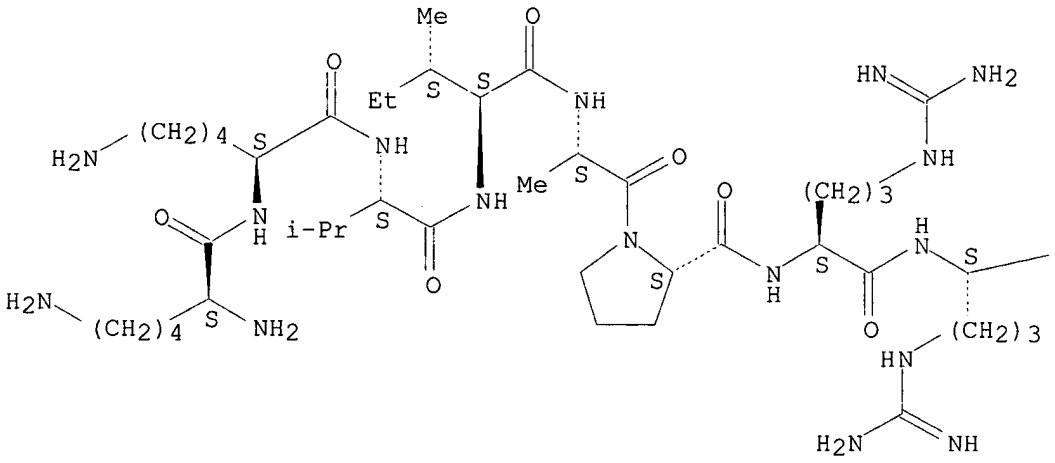
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 371180-10-8 HCAPLUS
CN DNA, d(G-G-G-T-C-C-A-C-A-T-G-G-T-C-T-G-C-C-T-G-C) (9CI) (CA INDEX NAME)

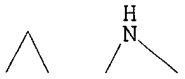
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 371180-11-9 HCAPLUS
CN DNA, d(G-C-C-A-C-C-A-G-C-C-C-T-G-C-T-G-T-T-A-A-G-G-C-C) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **371112-48-0 371112-49-1 371112-50-4**
**371112-51-5 371112-52-6**
RL: PRP (Properties)
(unclaimed sequence; human 88-KDa tumorigenic growth factor and its antagonists for cancer diagnosis and therapy)
RN 371112-48-0 HCAPLUS
CN L-Threonine, L-lysyl-L-lysyl-L-valyl-L-isoleucyl-L-alanyl-L-prolyl-L-arginyl-L-arginyl-L-leucyl-L-prolyl-L-.alpha.-aspartyl-L-prolyl-L-glutaminyl-L-isoleucyl-L-leucyl-L-lysyl-L-seryl-L-.alpha.-aspartyl- (9CI) (CA INDEX NAME)

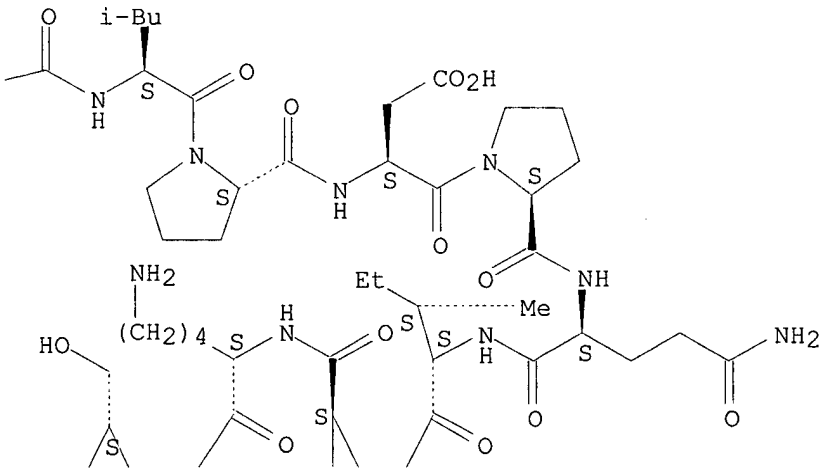
Absolute stereochemistry.

PAGE 1-A

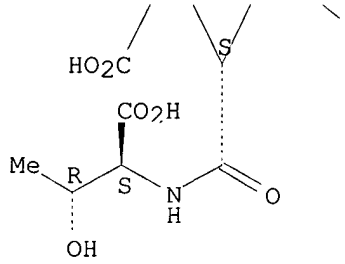




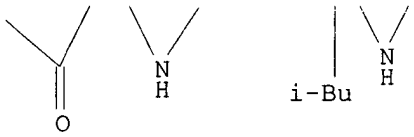
PAGE 1-B



PAGE 2-A



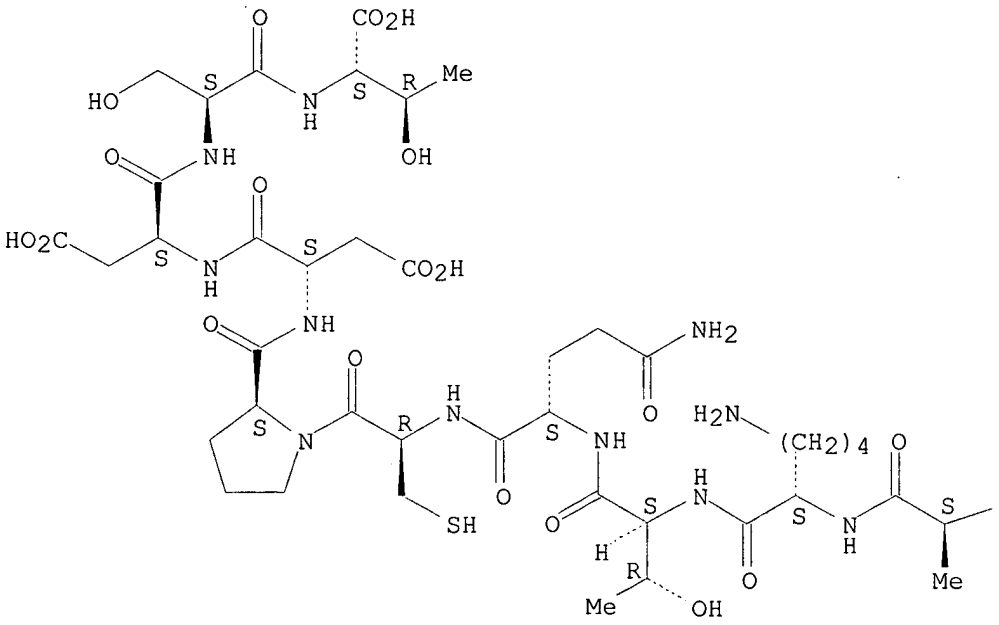
PAGE 2-B



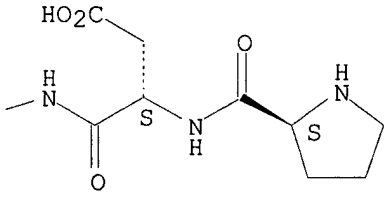
RN 371112-49-1 HCAPLUS
CN L-Threonine, L-prolyl-L-.alpha.-aspartyl-L-alanyl-L-lysyl-L-threonyl-L-glutaminyl-L-cysteinyl-L-prolyl-L-.alpha.-aspartyl-L-.alpha.-aspartyl-L-seryl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



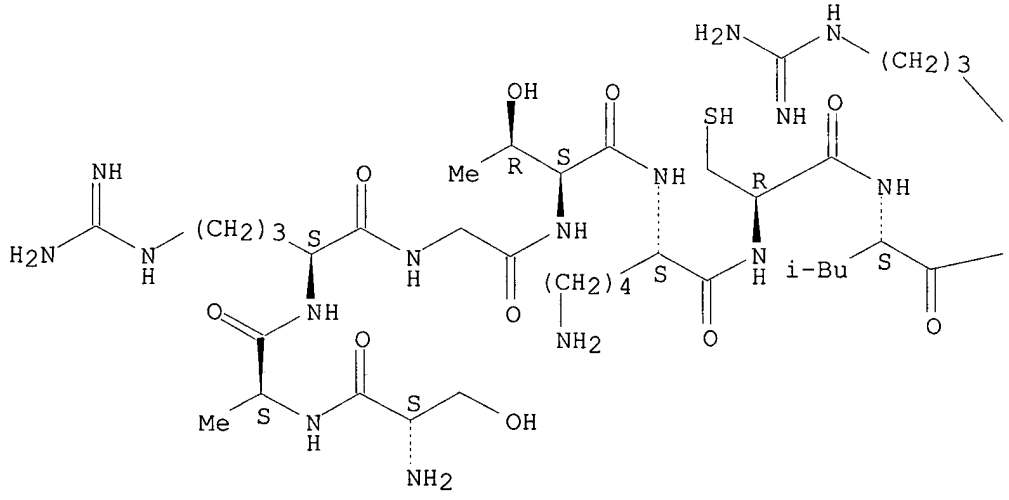
PAGE 1-B



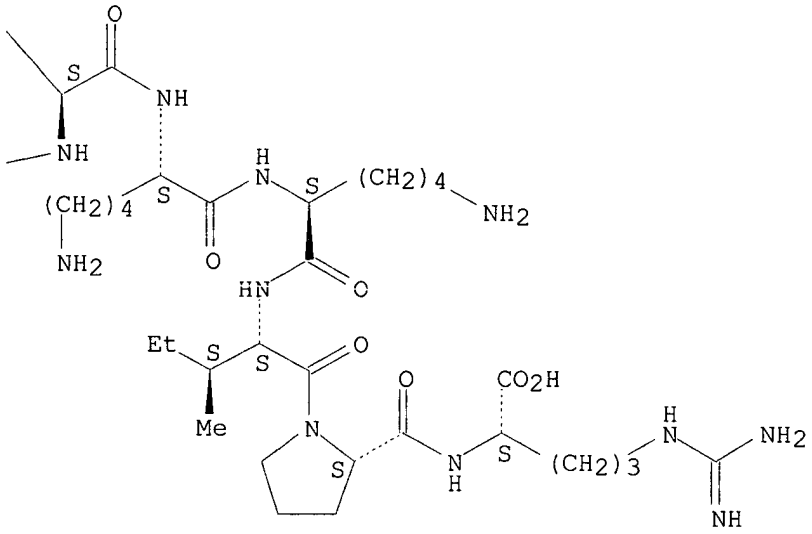
RN 371112-50-4 HCAPLUS
CN L-Arginine, L-seryl-L-alanyl-L-arginylglycyl-L-threonyl-L-lysyl-L-cysteinyl-L-leucyl-L-arginyl-L-lysyl-L-lysyl-L-isoleucyl-L-prolyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



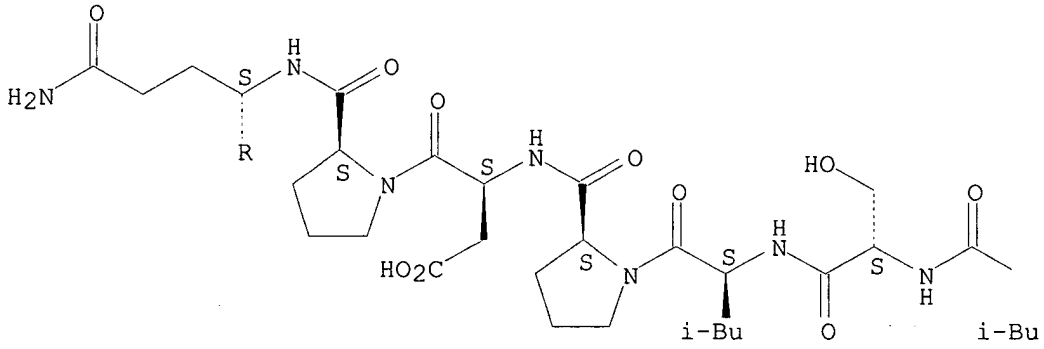
PAGE 1-B



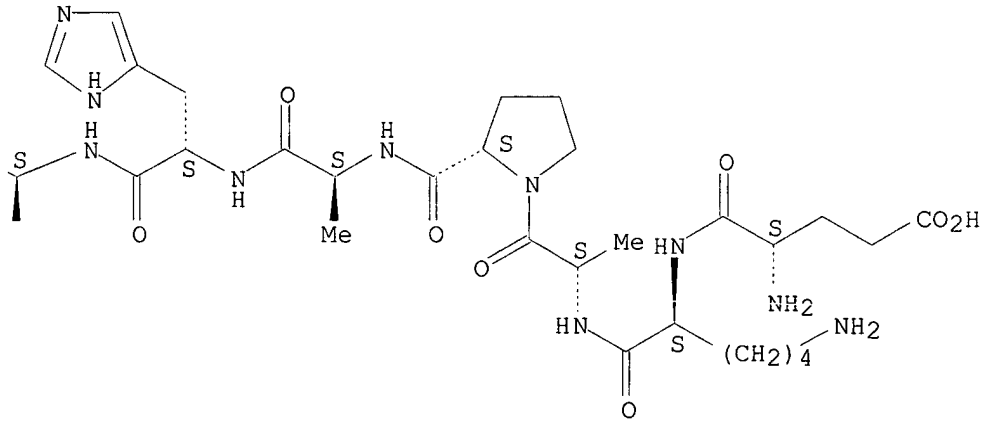
RN 371112-51-5 HCAPLUS
CN L-Valine, L-.alpha.-glutamyl-L-lysyl-L-alanyl-L-prolyl-L-alanyl-L-histidyl-L-leucyl-L-seryl-L-leucyl-L-prolyl-L-.alpha.-aspartyl-L-prolyl-L-glutaminyl-L-alanyl-L-leucyl-L-lysyl-L-arginyl-L-.alpha.-aspartyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

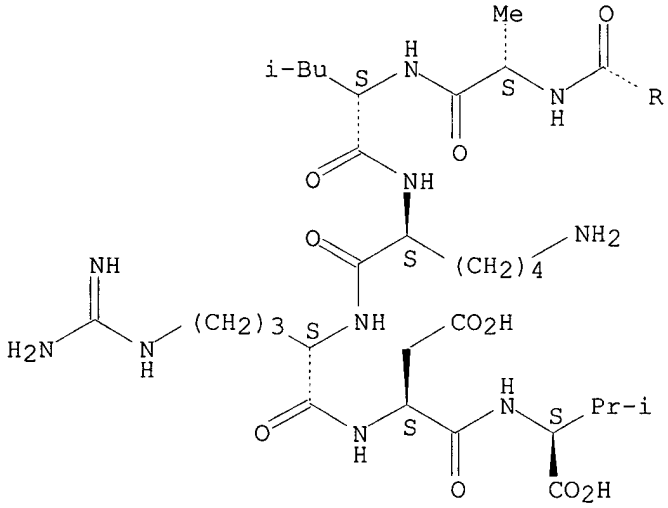
PAGE 1-A



PAGE 1-B



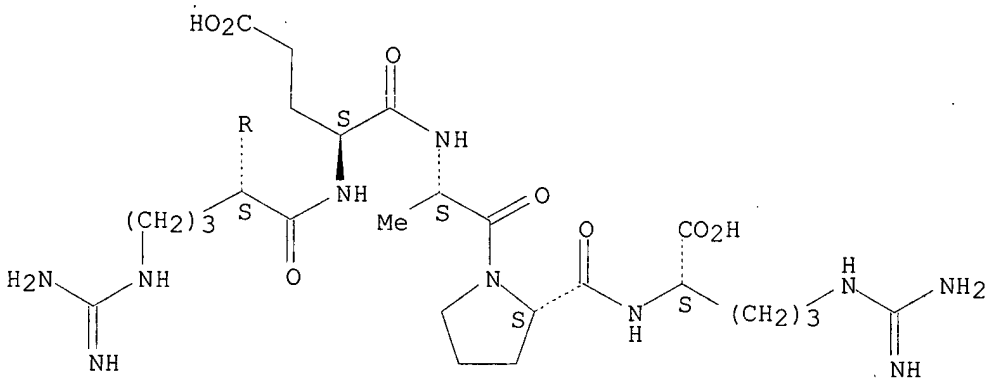
PAGE 2-A



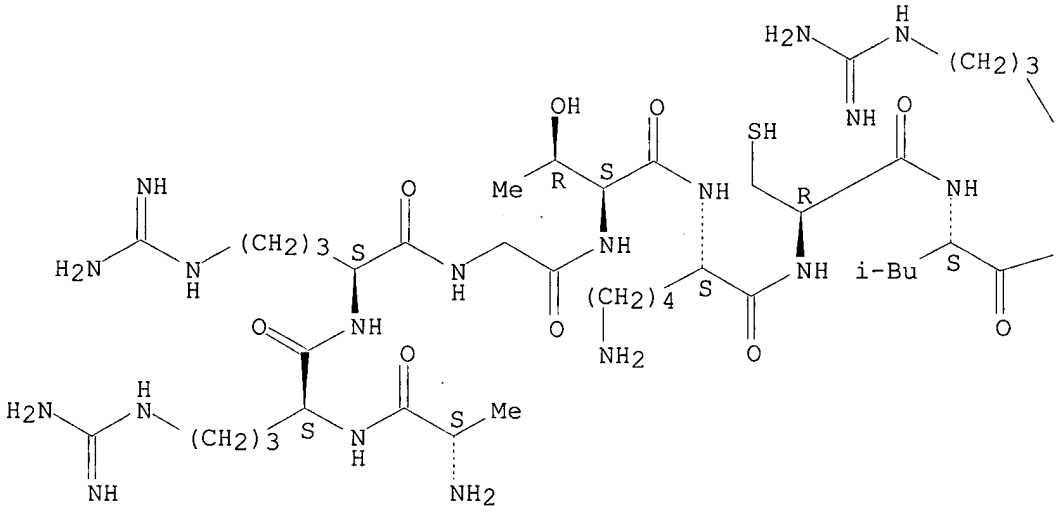
RN 371112-52-6 HCAPLUS
CN L-Arginine, L-alanyl-L-arginyl-L-arginylglycyl-L-threonyl-L-lysyl-L-cysteinyl-L-leucyl-L-arginyl-L-arginyl-L-.alpha.-glutamyl-L-alanyl-L-prolyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

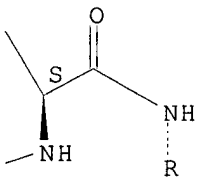
PAGE 1-A



PAGE 2-A



PAGE 2-B



IC ICM C12Q001-68
ICS C12P019-34; C12N015-11; C07H021-04
NCL 435006000

CC 3-3 (Biochemical Genetics)
Section cross-reference(s): 1, 2, 13, 14, 63
ST tumorigenic growth factor glycoprotein **GP88** cDNA sequence human; antibody antisense oligonucleotide antitumor drug glycoprotein **GP88** antagonists
IT Genetic vectors
Molecular cloning
Protein sequences
Transformation, genetic
cDNA sequences
(88-KDa tumorigenic growth factor and antagonists)
IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(88-KDa tumorigenic growth factor and antagonists)
IT Antisense DNA
Antisense oligonucleotides
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(88-KDa tumorigenic growth factor and antagonists)
IT Animal cell line
(C57MG, **GP88** mRNA overexpression in; 88-KDa tumorigenic growth factor and antagonists)
IT Northern blot hybridization
(**GP88** mRNA detection assay; 88-KDa tumorigenic growth factor and antagonists)
IT Adipose tissue, neoplasm
Animal tissue
Brain, neoplasm
Kidney, neoplasm
Liver, neoplasm
Ovary, neoplasm
Testis, neoplasm
(**GP88** mRNA distribution pattern in; 88-KDa tumorigenic growth factor and antagonists)
IT Glycoproteins, specific or class
RL: ADV (Adverse effect, including toxicity); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)
(**GP88**, of human; 88-KDa tumorigenic growth factor and antagonists)
IT Animal cell line
(MCF-7, **GP88** mRNA overexpression in; 88-KDa tumorigenic growth factor and antagonists)
IT Animal cell line
(MDA-468, **GP88** protein overexpression in; 88-KDa tumorigenic growth factor and antagonists)
IT Animal cell line
(MDA-MB-453, **GP88** mRNA overexpression in; 88-KDa tumorigenic growth factor and antagonists)
IT Animal cell line
(MDA-MB-468, **GP88** mRNA overexpression in; 88-KDa tumorigenic growth factor and antagonists)
IT Animal cell line
(PC, **GP88** mRNA overexpression in; 88-KDa tumorigenic growth factor and antagonists)
IT Nucleic acid hybridization
(RNA protection assay, **GP88** mRNA detection assay; 88-KDa tumorigenic growth factor and antagonists)

IT PCR (polymerase chain reaction)
(RT-PCR (reverse transcription-PCR), **GP88** mRNA detection assay; 88-KDa tumorigenic growth factor and antagonists)
IT Antitumor agents
(adipose tissue, **GP88** antagonists as; 88-KDa tumorigenic growth factor and antagonists)
IT Hybridoma
(anti-**GP88** antibody-producing; 88-KDa tumorigenic growth factor and antagonists)
IT Growth factors, animal
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(autocrine, **GP88** as; 88-KDa tumorigenic growth factor and antagonists)
IT Antitumor agents
(brain, **GP88** antagonists as; 88-KDa tumorigenic growth factor and antagonists)
IT Diagnosis
(cancer; 88-KDa tumorigenic growth factor and antagonists)
IT Gene, animal
RL: ADV (Adverse effect, including toxicity); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)
(for **GP88**, of human; 88-KDa tumorigenic growth factor and antagonists)
IT Receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(for glycoprotein **GP88**; 88-KDa tumorigenic growth factor and antagonists)
IT Fluorescent dyes
(for probe labeling; 88-KDa tumorigenic growth factor and antagonists)
IT Enzymes, biological studies
Isotopomers
Radionuclides, biological studies
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(for probe labeling; 88-KDa tumorigenic growth factor and antagonists)
IT Antitumor agents
(hepatoma, **GP88** antagonists as; 88-KDa tumorigenic growth factor and antagonists)
IT Liver, neoplasm
(hepatoma, inhibitors, **GP88** antagonists as; 88-KDa tumorigenic growth factor and antagonists)
IT Brain, neoplasm
Kidney, neoplasm
Ovary, neoplasm
Testis, neoplasm
(inhibitors, **GP88** antagonists as; 88-KDa tumorigenic growth factor and antagonists)
IT Antitumor agents
(kidney, **GP88** antagonists as; 88-KDa tumorigenic growth factor and antagonists)
IT Antitumor agents
(mammary gland, **GP88** antagonists as; 88-KDa tumorigenic growth factor and antagonists)
IT Mammary gland
(neoplasm, **GP88** mRNA distribution pattern in; 88-KDa

tumorigenic growth factor and antagonists)

IT Mammary gland
(neoplasm, inhibitors, **GP88** antagonists as; 88-KDa tumorigenic growth factor and antagonists)

IT Antibodies
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(neutralizing, **GP88**-binding; 88-KDa tumorigenic growth factor and antagonists)

IT Iodination
(of **GP88**; 88-KDa tumorigenic growth factor and antagonists)

IT Molecular association
(of glycoprotein **GP88** and its cell surface receptor; 88-KDa tumorigenic growth factor and antagonists)

IT Antitumor agents
(ovary, **GP88** antagonists as; 88-KDa tumorigenic growth factor and antagonists)

IT Animal tissue
(peripheral, **GP88** mRNA distribution pattern in; 88-KDa tumorigenic growth factor and antagonists)

IT Antitumor agents
(testis, **GP88** antagonists as; 88-KDa tumorigenic growth factor and antagonists)

IT **147036-84-8**
RL: ADV (Adverse effect, including toxicity); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)
(amino acid sequence; 88-KDa tumorigenic growth factor and antagonists)

IT **216663-36-4P**, Glycoprotein **GP88** (mouse strain C3H PC cell)
RL: BOC (Biological occurrence); BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process)
(amino acid sequence; 88-KDa tumorigenic growth factor and antagonists)

IT **14158-31-7**, Iodine 125, biological studies
RL: AGR (Agricultural use); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(for **GP88** labeling; 88-KDa tumorigenic growth factor and antagonists)

IT **140086-63-1**, GenBank M75161
RL: ADV (Adverse effect, including toxicity); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)
(nucleotide sequence; 88-KDa tumorigenic growth factor and antagonists)

IT **216663-35-3P**, DNA (mouse strain C3H PC cell glycoprotein **GP88** cDNA plus flanks)
RL: BOC (Biological occurrence); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(nucleotide sequence; 88-KDa tumorigenic growth factor and antagonists)

IT **371180-05-1 371180-06-2 371180-07-3**
**371180-08-4 371180-09-5 371180-10-8**
**371180-11-9**
RL: PRP (Properties)
(unclaimed nucleotide sequence; human 88-KDa tumorigenic growth factor and its antagonists for cancer diagnosis and therapy)

IT **371112-48-0 371112-49-1 371112-50-4**

**371112-51-5 371112-52-6**
RL: PRP (Properties)
(unclaimed sequence; human 88-KDa tumorigenic growth factor and its antagonists for cancer diagnosis and therapy)
REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr ind 3

L8 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:789048 HCAPLUS
DOCUMENT NUMBER: 130:37295
TITLE: 88-KDa tumorigenic growth factor and antagonists
INVENTOR(S): **Serrero, Ginette**
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 97 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9852607 | A1 | 19981126 | WO 1998-US10555 | 19980522 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| US 6309826 | B1 | 20011030 | US 1997-991862 | 19971216 |
| AU 9877978 | A1 | 19981211 | AU 1998-77978 | 19980522 |
| EP 1011723 | A1 | 20000628 | EP 1998-926056 | 19980522 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |

PRIORITY APPLN. INFO.: US 1997-863079 A 19970523
US 1997-991862 A 19971216
WO 1998-US10555 W 19980522

AB This invention relates to products and methods for treating cancer and for diagnosing tumorigenicity and other diseases assocd. with alteration in **GP88** expression or action. Antagonists to an 88KDa autocrine growth and tumorigenicity stimulator are provided which inhibit its expression or biol. activity. The antagonists include antisense oligonucleotides and antibodies.

IT **14158-31-7**, Iodine 125, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(88-KDa tumorigenic growth factor and antagonists)

RN 14158-31-7 HCAPLUS
CN Iodine, isotope of mass 125, at. (8CI, 9CI) (CA INDEX NAME)

$^{125}I$

IT **216663-36-4P**
RL: BOC (Biological occurrence); BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process)
(amino acid sequence; 88-KDa tumorigenic growth factor and antagonists)

RN 216663-36-4 HCAPLUS
CN Glycoprotein GP88 (mouse strain C3H PC cell) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **216663-35-3P**
RL: BOC (Biological occurrence); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(nucleotide sequence; 88-KDa tumorigenic growth factor and antagonists)
RN 216663-35-3 HCAPLUS
CN DNA (mouse strain C3H PC cell glycoprotein GP88 cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IC ICM A61K039-395
ICS A61K031-70; A01N043-04
CC 15-2 (Immunochemistry)
Section cross-reference(s): 63
ST glycoprotein **GP88** tumorigenic growth factor antibody antisense sequence antitumor
IT Antitumor agents
Genetic vectors
Molecular cloning
Neoplasm
Protein sequences
Transformation, genetic
cDNA sequences
(88-KDa tumorigenic growth factor and antagonists)
IT Antisense RNA
Antisense oligonucleotides
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(88-KDa tumorigenic growth factor and antagonists)
IT Glycoproteins, specific or class
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)
(**GP88**, antagonists; 88-KDa tumorigenic growth factor and antagonists)
IT Hybridoma
(anti-**GP88** antibody-producing; 88-KDa tumorigenic growth factor and antagonists)
IT Growth factors, animal
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)
(autocrine; 88-KDa tumorigenic growth factor and antagonists)
IT Mammary gland
(carcinoma, **GP88** expression inhibition in human; 88-KDa tumorigenic growth factor and antagonists)
IT Receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(for glycoprotein **GP88**; 88-KDa tumorigenic growth factor and antagonists)
IT Antibodies
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(neutralizing, **GP88**-binding; 88-KDa tumorigenic growth factor and antagonists)
IT Iodination
(of **GP88**; 88-KDa tumorigenic growth factor and antagonists)
IT **14158-31-7**, Iodine 125, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES

(Uses)
(88-KDa tumorigenic growth factor and antagonists)

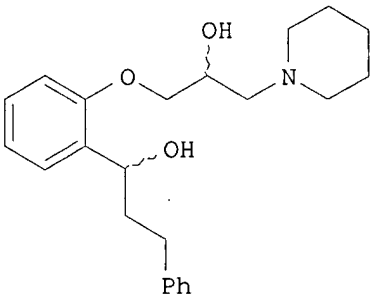
IT **216663-36-4P**
RL: BOC (Biological occurrence); BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process)
(amino acid sequence; 88-KDa tumorigenic growth factor and antagonists)

IT **216663-35-3P**
RL: BOC (Biological occurrence); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(nucleotide sequence; 88-KDa tumorigenic growth factor and antagonists)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 1-4

L16 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:250026 HCAPLUS
DOCUMENT NUMBER: 129:12375
TITLE: Synthesis and pharmacological activity of the stereoisomers of GP-88, a propafenone-type modulator of multidrug resistance
AUTHOR(S): Chiba, Peter; Rebitzer, Sascha; Richter, Elisabeth; Hitzler, Manuela; Ecker, Gerhard
CORPORATE SOURCE: Institute of Medical Chemistry, University of Vienna, Vienna, A-1090, Austria
SOURCE: Bioorganic & Medicinal Chemistry Letters (1998), 8(7), 829-832
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
GI




I

AB All four stereoisomers of the propafenone-type MDR-modulator GP-88 I were synthesized using a combined approach with chiral pool building blocks and an acetalic protective group, which allows not only diastereosepn. but also assignment of abs. configuration via NMR spectroscopy. Those isomers with different configuration on the center of chirality in the propanolamine side chain showed statistically different PGP-inhibitory activity. Generally, the (R)-configured isomers were by a factor of nearby two higher active than the (S)-isomers. No differences in activity were obsd. for isomers with different configuration on the benzylic center of chirality.

L16 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1993:189646 HCAPLUS
DOCUMENT NUMBER: 118:189646
TITLE: Isolation and sequence of the granulin precursor cDNA from human bone marrow reveals tandem cysteine-rich granulin domains
AUTHOR(S): Bhandari, Vijay; Palfree, Roger G. E.; Bateman, Andrew
CORPORATE SOURCE: Endocr. Lab., R. Victoria Hosp., Montreal, PQ, H3A 1A1, Can.
SOURCE: Proc. Natl. Acad. Sci. U. S. A. (1992), 89(5), 1715-19
CODEN: PNASA6; ISSN: 0027-8424
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Granulins are candidate growth factors recently discovered in human and

rat inflammatory leukocytes and bone marrow. Two granulin homologs, epithelin 1 and 2, occur in the rat kidney. Epithelin 1, which is probably identical to rat leukocyte granulin, exhibits proliferative and antiproliferative effects on epithelial cells in vitro. Here, by cDNA anal., the prepropeptide for the human granulins is a 593-residue glycoprotein, contg. seven tandem repeats of the 12-cysteine granulin domain. By Northern blot anal., gene expression was seen in myelogenous **leukemic** cell lines of promonocytic, promyelocytic, and proerythroid lineage, in fibroblasts and was seen very strongly in epithelial cell lines. Some epithelial cell lines respond to the mature peptide and express the gene. Among tissues examd., the kidney had the highest levels of granulin mRNA.

IT **147036-84-8**
RL: PRP (Properties)
(amino acid sequence of, complete)
RN 147036-84-8 HCAPLUS
CN Granulin, prepro- (human clone HBM3/HBM12 reduced) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **140086-63-1**, GenBank M75161
RL: PRP (Properties)
(nucleotide sequence of)
RN 140086-63-1 HCAPLUS
CN DNA, (human clone HBM3/HBM12 granulin cDNA plus flanks) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L16 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1990:5525 HCAPLUS
DOCUMENT NUMBER: 112:5525
TITLE: A human 88-kD membrane glycoprotein (CD36) functions in vitro as a receptor for a cytoadherence ligand on Plasmodium falciparum-infected erythrocytes
AUTHOR(S): Barnwell, John W.; Asch, Adam S.; Nachman, Ralph L.; Yamaya, Minoru; Aikawa, Masamichi; Ingravallo, Paul
CORPORATE SOURCE: Med. Cent., New York Univ., New York, NY, 10010, USA
SOURCE: J. Clin. Invest. (1989), 84(3), 765-72
CODEN: JCINAO; ISSN: 0021-9738
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Plasmodium falciparum-infected erythrocytes (IE) specifically adhere to vascular endothelium in vivo and to human endothelial cells, some human **melanoma** cell lines, and human monocytes in vitro. The tissue cell receptor for a ligand on the surface of the IE is an Mr 88,000 glycoprotein (**GP88**) recognized by the MAb OKM5, which also blocks cytoadherence of IE. Isolated, affinity-purified **GP88** (CD36) competitively blocks cytoadherence and when absorbed to plastic surfaces, specifically binds P. falciparum IE. Addnl., monoclonal and polyclonal antibodies to **GP88** block cytoadherence to both target cells and immobilized **GP88**. Binding to **GP88** by IE is unaffected by the absence of calcium or the absence of thrombospondin, a putative mediator for cytoadherence of P. falciparum IE. Thus, **GP88** (CD36), which has been demonstrated to be the same as platelet glycoprotein IV, interacts directly with P. falciparum IE, presumably via a parasite-induced ligand exposed on the surface of the infected erythrocytes. CD36 is shown to be present on brain endothelium in both individuals without malaria and individuals with cerebral malaria. This would suggest that factors other than just cerebral sequestration of IE play an initiating role in the genesis of cerebral malaria.

L16 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1984:625126 HCAPLUS
DOCUMENT NUMBER: 101:225126
TITLE: Further characterization of proteins assembled by vesicular stomatitis virus from human **tumor** cells
AUTHOR(S): Zavada, Jan; Huang, Alice S.
CORPORATE SOURCE: Dep. Microbiol. Mol. Genet., Harvard Med. Sch., Boston, MA, 02115, USA
SOURCE: Virology (1984), 138(1), 16-25
CODEN: VIRLAX; ISSN: 0042-6822
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Vesicular stomatitis virus (VSV), when reproduced in human **tumor** cell lines, assembled a specific subset of cell-derived proteins. These proteins were detected by [35S]methionine labeling of cells prior to infection and subsequent immunopptn. of VSV grown in these cells, as well as by direct immunopptn. of labeled cell exts. with antiserum directed against the VSV-assembled proteins. Their mol. wt. (Mr) range was 15-180 kilodaltons (kDa); the larger proteins were glycosylated. Two of the major protein species (**gp88** and gp130) were common to all 4 cell lines used [HeLa (cervical carcinoma), T47D (breast carcinoma), and HMB2 and SK1477 (**melanoma** cell lines)]. Proteins of other mol. wts. were detected only in 1 or 2 of the cell lines. The **melanoma** cell lines (even in the absence of VSV) shed large particulate material which had contained the same spectrum of proteins that were assembled by VSV. The major protein component had a Mr of 30 kDa.

=> d ibib abs hitstr 1-9

L18 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:3579 HCAPLUS
DOCUMENT NUMBER: 106:3579
TITLE: Antigenic variation among human strains of influenza C virus detected with monoclonal antibodies to gp88 glycoprotein
AUTHOR(S): Sugawara, Kanetsu; Nishimura, Hidekazu; Kitame, Fumio; Nakamura, Kiyoto
CORPORATE SOURCE: Sch. Med., Yamagata Univ., Yamagata, 990-23, Japan
SOURCE: Virus Res. (1986), 6(1), 27-32
CODEN: VIREDF; ISSN: 0168-1702
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Antigenic variation among influenza C virus strains was investigated with monoclonal antibodies against **gp88** glycoprotein. Seven monoclonal antibodies obtained were tentatively classified into 2 groups, A and B. The group A antibodies had hemagglutination **inhibition** (HI), hemolysis **inhibition** and neutralization activities whereas the group B antibodies possessed none of them. A comparison of antigenicity among 15 human strains with these antibodies in radioimmunopptn. and HI tests showed that the regions recognized by the group A antibodies undergo considerable changes, whereas those by group B are conserved among the strains.

L18 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:531048 HCAPLUS
DOCUMENT NUMBER: 105:131048
TITLE: Biochemical characterization of the major peanut-agglutinin-binding glycoproteins in vertebrate retinae
AUTHOR(S): Hageman, Gregory S.; Johnson, Lincoln V.
CORPORATE SOURCE: Sch. Med., Univ. South. California, Los Angeles, CA, 90033, USA
SOURCE: J. Comp. Neurol. (1986), 249(4), 499-510
CODEN: JCNEAM; ISSN: 0021-9967
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Peanut agglutinin (PNA), a lectin that binds D-galactose-.beta. (1.fwdarw.3) N-acetyl-D-galactosamine disaccharide linkages, selectively labels cone photoreceptors in the retinae of a variety of species. PNA binds consistently to domains of the interphotoreceptor matrix assocd. with cone, but not rod, inner and outer segments, cone cell body and axonal membranes, cone synaptic pedicles, and portions of the inner plexiform layer. To begin the characterization of the mol. species responsible for cone-specific PNA binding, chick, turkey, rat, dog, pig, monkey, and human retinal exts. were sepd. by SDS-PAGE and probed with peroxidase-conjugated PNA. The presence of 6 major groups of PNA-binding glycoproteins ranging 30-88 kilodaltons was revealed. Most of these are shared by the 7 species examd.; however, some interspecies variation is present. Three groups, designated GP39/40, GP42/45, and GP60, are the most intensely labeled by PNA and are common to all species analyzed, whereas groups GP29/31 and **GP88** are less intensely labeled and are present in most but not all of the species investigated. Labeling of the GP54 group is variable but is most consistently assocd. with exts. of rat and pig retinae. Trypsin **treatment**, which results in the loss of cone-assocd. PNA binding in the interphotoreceptor matrix, causes a visually detectable redn. in 3 of the 6 groups of PNA-binding glycoproteins in porcine retinal exts. Of these, GP54 is the most

sensitive, being undetectable on PNA-stained blots after only 5 min of enzyme exposure; **GP88** and GP45 are less sensitive but both are markedly reduced after 15 min of trypsinization. Trypsin-sensitive mols. thus may be involved in the establishment of the cone-specific domains of interphotoreceptor matrix identified by PNA binding.

L18 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:439104 HCAPLUS
DOCUMENT NUMBER: 105:39104
TITLE: The functions of oligosaccharide chains associated with influenza C viral glycoproteins. I. The formation of influenza C virus particles in the absence of glycosylation
AUTHOR(S): Hongo, S.; Sugawara, K.; Homma, M.; Nakamura, K.
CORPORATE SOURCE: Sch. Med., Yamagata Univ., Yamagata, 990-23, Japan
SOURCE: Arch. Virol. (1986), 89(1-4), 171-87
CODEN: ARVIDF; ISSN: 0304-8608
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effect of a glycosylation **inhibitor**, tunicamycin (TM), on the replication of influenza C virus was investigated. Incorporation of [3H]glucosamine into the **gp88** glycoproteins of this virus was completely **inhibited** by TM at concns. >0.25 .mu.g/mL. Under these conditions, the synthesis of internal proteins NP and M was shown in TM-**treated** cells but the synthesis of gp 88 was not. The disappearance of gp 88 was, however, accompanied by the appearance of 2 new polypeptides with mol. wt. of 80,000 (T80) and 76,000 (T76). While T80 was identified by peptide mapping as a host cell protein whose synthesis was enhanced by TM, T76 was shown to correspond to a nonglycosylated form of **gp88**. Pulse-chase expts. revealed that there was no significant difference in the intracellular stability of T76 and **gp88**. Although TM depressed the prodn. of infectious progeny virus >100-fold, only a 5-fold decrease was obsd. in the release of noninfectious phys. particles, suggesting that glycosylation is not essential for the formation of influenza C virus particles. However, the virions from TM-**treated** cells had a lower buoyant d. in isopycnic sucrose gradients and lacked surface proteins in either glycosylated or nonglycosylated form.

L18 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:422684 HCAPLUS
DOCUMENT NUMBER: 105:22684
TITLE: The functions of oligosaccharide chains associated with influenza C viral glycoproteins. II. The role of carbohydrates in the antigenic properties of influenza C viral glycoproteins
AUTHOR(S): Hongo, S.; Sugawara, K.; Homma, M.; Nakamura, K.
CORPORATE SOURCE: Sch. Med., Yamagata Univ., Yamagata, 990-23, Japan
SOURCE: Arch. Virol. (1986), 89(1-4), 189-201
CODEN: ARVIDF; ISSN: 0304-8608
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The antigenic properties of influenza C viral glycoprotein **gp88** were compared with those of its nonglycosylated counterpart, T76, synthesized in infected cells **treated** with tunicamycin. Radioimmunopptn. expts. with 3 different monoclonal antibodies against **gp88** revealed that an antibody, designated Q-5, pptd. **gp88** , but not T76, indicating the requirement for glycosylation for the binding of this antibody to **gp88**. It is unlikely, however, that the antigenic determinant recognized by Q-5 is a carbohydrate moiety,

since the ability of the antibody to bind to **gp88** varied depending on the virus strain, and trypsin-**treatment** of **gp88** eliminated its reactivity with Q-5. Gel electrophoretic anal. under nonreducing conditions showed that T76 underwent the formation of disulfide-linked multimers in the absence of reducing agent, while **gp88** behaved as monomers, suggesting that glycosylation is required for **gp88** mols. to attain an appropriate conformation. Apparently, glycosylation is important in detg. the immunol. specificity of **gp88**, presumably by influencing the folding of this glycoprotein.

L18 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:182101 HCAPLUS
DOCUMENT NUMBER: 104:182101
TITLE: An assay for the receptor-destroying activity of influenza C virus
AUTHOR(S): Sugawara, Kanetsu; Kitame, Fumio; Homma, Morio; Nakamura, Kiyoto
CORPORATE SOURCE: Sch. Med., Yamagata Univ., Yamagata, 990-23, Japan
SOURCE: Microbiol. Immunol. (1985), 29(12), 1207-17
CODEN: MIIMDV; ISSN: 0385-5600
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A convenient assay for the receptor-destroying enzyme (RDE) activity of influenza C virus was developed. This method measures the ability of the RDE to destroy the hemagglutination-**inhibition** activity of a potent **inhibitor** present in rat serum. Some physicochem. properties of the RDE of influenza C virus were investigated by this method. The temp. optimum for maximal activity of this enzyme was 45-53.degree.. There was little difference in thermostability between the RDE and hemagglutinating activities of influenza C virus. When influenza C virions were **treated** with various concns. of trypsin, the RDE activity decreased in parallel with the decrease in the amt. of residual **gp88** glycoprotein, suggesting assocn. of RDE with this glycoprotein.

L18 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:4390 HCAPLUS
DOCUMENT NUMBER: 104:4390
TITLE: Effects of glycosylation on the conformation and antigenicity of influenza C viral glycoproteins
AUTHOR(S): Hongo, Seiji; Sugawara, Kanetsu; Homma, Morio; Nakamura, Kiyoto
CORPORATE SOURCE: Sch. Med., Yamagata Univ., Yamagata, 990-23, Japan
SOURCE: Vaccine (1985), 3(3, suppl.), 223-6
CODEN: VACCDE
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The antigenicity of influenza C viral glycoprotein **gp88** was compared with that of its nonglycosylated counterpart T76 by immunopptn. utilizing monoclonal antibodies against **gp88**. Of the 3 monoclonal antibodies tested, an antibody designated Q-5 was found to ppt. **gp88** but not T76, indicating the requirement of glycosylation for the binding of Q-5 to **gp88**. However, the antigenic determinants recognized by Q-5 did not appear to be carbohydrates since trypsin-**treatment** of **gp88** eliminated its reactivity with this antibody. These results suggest that glycosylation is important in detg. the antigenicity of **gp88** presumably by influencing the folding of the glycoproteins.

L18 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1985:128476 HCAPLUS
DOCUMENT NUMBER: 102:128476
TITLE: Structural analysis of the varicella-zoster virus gp98-gp62 complex: posttranslational addition of N-linked and O-linked oligosaccharide moieties
AUTHOR(S): Montalvo, Eduardo A.; Parmley, Richard T.; Grose, Charles
CORPORATE SOURCE: Health Sci. Cent., Univ. Texas, San Antonio, TX, 78284, USA
SOURCE: J. Virol. (1985), 53(3), 761-70
CODEN: JOVIAM; ISSN: 0022-538X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Varicella-zoster virus specifies the formation of several glycoproteins, including the preponderant gp98-gp62 glycoprotein complex in the outer membranes of virus-infected cells. These viral glycoproteins are recognized and pptd. by a previously described monoclonal antibody designated monoclone 3B3. When an immunoblot anal. was performed, only gp98 was reactive with monoclone 3B3 antibody; likewise, titrn. in the presence of increased concns. of SDS during antigen-antibody incubations caused selective pptn. of gp98 but not gp62. Further structural analyses of gp98 were performed by using the glycosidases endo-.beta.-N-acetylglucosaminidase H (endoglycosidase H) and neuraminidase and 2 **inhibitors** of glycosylation (tunicamycin and monensin). In addn. to gp98, antibody 3B3 reacted with several intermediate products, including gp90, **gp88**, gp81, and a nonglycosylated polypeptide, p73. Since gp98 was completely resistant to digestion with endoglycosidase H, it contained only complex carbohydrate moieties; conversely, gp81 contained mainly high-mannose residues. Polypeptide p73 was immunodetected in the presence of tunicamycin designated as a nascent recipient of N-linked sugars, whereas **gp88** was considered to contain O-linked oligosaccharides because its synthesis was not affected by tunicamycin. The ionophore monensin **inhibited** prodn. of mature gp98, but other intermediate forms, including gp90, were detected. Since the latter product was similar in mol. wt. to the desialated form of gp98, one effect of monensin **treatment** of varicella-zoster virus-infected cells was to block the addn. of N-acetylneuraminic acid. Monensin also blocked insertion of gp98 into the plasma membrane and, as detd. by electron microscopy, **inhibited** envelopment of the nucleocapsid and its transport within the cytoplasm. Conclusions are: (1) the primary antibody 3B3-binding epitope is located on gp98, (2) gp98 is a mature product of viral glycoprotein processing, (3) gp98 contains both N-linked and O-linked oligosaccharide side chains, gp90 is the desialated penultimate form of gp98, (5) **gp88** is an O-linked intermediate of gp98, (6) gp81 is the high-mannose intermediate of gp98, and (7) p73 is the unglycosylated precursor of gp98.

L18 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1983:591420 HCAPLUS
DOCUMENT NUMBER: 99:191420
TITLE: The synthesis of polypeptides in influenza C virus-infected cells
AUTHOR(S): Yokota, Masashi; Nakamura, Kiyoto; Sugawara, Kanetsu; Homma, Morio
CORPORATE SOURCE: Sch. Med., Yamagata Univ., Yamagata, 990-23, Japan
SOURCE: Virology (1983), 130(1), 105-17
CODEN: VIRLAX; ISSN: 0042-6822
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The synthesis of virus-specific polypeptides was analyzed in MDCK cells infected with the JJ/50 strain of influenza C virus. In addn. to the 3 major structural proteins **gp88**, NP, and M, the synthesis of 5 polypeptides with mol. wts. of 29,500 (C1), 27,500 (C2), 24,000 (C3), 19,000 (C4), and 14,000 (C5) was found in infected cells. None of these polypeptides was detected either in virions or in immunoppts. obtained after **treatment** of infected cell lysates with antiviral serum, suggesting that they are not viral structural proteins. Polypeptides C1-C5 were synthesized in MDCK cells infected with different influenza C virus strains as well as in different host cell types infected with C/JJ/50. Cellular protein synthesis was greatly reduced under hypertonic conditions, whereas the synthesis of C1-C5 was relatively unaffected. Apparently, polypeptides C1-C5 are virus-coded rather than host cell-coded. Peptide mapping studies showed that each of the polypeptides C3, C4, and C5 had a peptide compn. similar to the M protein. The amt. of C2 synthesized in infected cells was insufficient for mapping. This polypeptide rapidly disappeared in pulse-chase expts., suggesting that C2 is probably not unique but is biosynthetically related to one of the other proteins. In contrast to these polypeptides, polypeptide C1 showed a map which is largely different from any major structural polypeptide. Perhaps C1 is a nonstructural protein of influenza C virus similar to the NS1 protein of influenza A and B viruses.

L18 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1979:148195 HCAPLUS
DOCUMENT NUMBER: 90:148195
TITLE: Carbohydrate components of influenza C virions
AUTHOR(S): Nakamura, Kiyoto; Herrler, George; Petri, Thomas; Meier-Ewert, Herbert; Compans, Richard W.
CORPORATE SOURCE: Med. Cent., Univ. Alabama, Birmingham, Ala., USA
SOURCE: J. Virol. (1979), 29(3), 997-1005
CODEN: JOVIAM; ISSN: 0022-538X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The carbohydrate components of influenza C virions grown in chicken kidney (CK) cells were analyzed by gel filtration following exhaustive digestion with Pronase. The glucosamine-3H-labeled glycopeptides were larger and more heterogeneous than those of influenza A/WSN virions; 3 major size classes (G1, G2, and G3) were resolved. **Treatment** with Vibrio cholerae neuraminidase caused a decrease in size of G1 and G2, along with release of .apprx.16% of the 3H label. The released sugar components were identified as N-acetylneuraminic acid by thin-layer chromatog. Peak G3 was highly labeled with mannose-3H, whereas G1 and G2 contained lower levels of mannose. The 3 major viral glycoproteins **gp88**, gp65, and gp30 were isolated from Na dodecyl sulfate-polyacrylamide gels, and their glycopeptide components were analyzed after Pronase digestion. The 3 size classes of glycopeptides were obtained from any of the 3 glycoproteins; however, the relative amts. of the 3 components varied among the glycoproteins. Host cell-derived components, which appear to be mucopolysaccharides and glycoproteins, were assocd. with influenza C virions grown in CK cells. These components contained glycopeptides that were mainly of sizes similar to peak G2 from influenza C virions. Previous studies have shown that influenza A/WSN virus grown in several cell types contained only 2 size classes of glycopeptides. Two size classes comparable to peaks G2 and G3 from influenza C virions were also obsd. in influenza A/WSN grown in CK cells. Thus, the large G1 glycopeptides appear to be characteristic of influenza C virions.